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Fig. 1a)

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cgtgctctcg ggaagctgca ccgccttctg gagaagcggc aggaaggcgc ggagacgtg 120
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agcttagcat aatgtctggg gaaaca

```

Fig. 1b)

```
1    MEFRQEEFRK LAGRALGKLH RLLEKRQEGA ETLELSADGR PVTQTQTRDPP
51   VVDCTCFGLP RRYIIAIMSG LGFCISFGIR CNLGVAIVSM VNNSTTHRGG
101  HVVVQKAQFS WDPETVGLIH GSFFWGYIVT QIPGGFICQK FAANRVFGFA
151  IVATSTLNML IPSAARVHYG CVIFVRILQG LVEGVTPAC HGIWSKWAPP
201  LERSRLATTA FCGSYAGAVV AMPLAGVLVQ YSGWSSVFYV YGSFGIFWYL
251  FWLLVSYESP ALHPSISEEE RKYIEDAIGE SAKLMNPLTK FSTPWRRFFT
301  SMPVYAIIVA NFCRSWTFYL LLISQPAYFE EVFGFEISKV GLVSALPHLV
351  MTIIVPIGGQ IADFLRSRRI MSTTNVRKLM NCGGFGMEAT LLLVVGYSHS
401  KGVAISFLVL AVGFSGFAIS GFNVNHLDA PRYASILMGI SNGVGTLSGM
451  VCPPIVGAMT KHKTREEWQY VFLIASLVHY GGVIFYGVFA SGEKQPWAEP
501  EEMSEEKCGF VGHDQLAGSD DSEMEDEAEP PGAPPAPPPS YGATHSTFQP
551  PRPPPPVRDY
```

Fig. 1c)

cgataagctt	gatatcgaat	tccggactct	tgctcgggcg	ccttaaccog	gcgttcgggt	60
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tgcgtcgggt	ctgcgagagc	gccagctatc	ctgagggaaa	cttcggaggg	aaccagctac	300
tagatgggtc	gattagttct	tgcgccctat	acccaggtcg	gacgaccgat	ttgcacgtca	360
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ccagttcagc	tgggatccag	agactgtcgg	cctcatcac	ggctcctttt	tctggggcta	840
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caaactctct	ccaactctgt	tctgcactct	ccagattggg	ttaaccaatt	actcgtcccc	2640
gccattccag	ggattgatcc	tcaccagcgt	ttctgatgga	aaatggcggg	aattcctgca	2700
gcccggggga	tccact					2716

Fig. 1d)

```
1   MEFRQEEFRK LAGRALGKLH RLLEKRQEGA ETLELSADGR PVTTQTRDPP
51  VVDCTCFGLP RRYIIAIMSG LGFCISFGIR CNLGVAIVSM VNNSTTHRGG
101 HVVVQKAQFS WDPETVGLIH GSFFWGYIVT QIPGGFICQK FAANRVFGFA
151 IVATSTLNML IPSAARVHYG CVIFVRILQG LVEGVITYPAC HGIWSKWAPP
201 LERSRLATTA FCGSYAGAVV AMPLAGVLVQ YSGWSSVFYV YGSFGIFWYL
251 FWLLVSYESP ALHPSISEEE RKYIEDAIGE SAKLMNPLTK FSTPWRRFFT
301 SMPVYAIIVA NFCRSWTFYL LLISQPDYFE EVFGFEISKV GLVSALPHLV
351 MTIIVPIGGQ IADFLRSRRI MSTTNVRKLM NCGGFGMEAT LLLVVGYSHS
401 KGVAISFLVL AVGFSGFAIS GFNVNHLDA PRYASILMGI SNGVGTLSGM
451 VCPIIVGAMT KHKTREEWQY VFLIASLVHY GGVIFYGVFA SGEKQPWAEF
501 EEMSEEKCGF VGHDQLAGSD DSEMEDEAEP PGAPPAPPPS YGATHSTFQP
551 PRPPPPVRDY
```

Fig. 1)

```

gaattcggca cgagcggagc tgcggggccg ggccggggccg gggcgggaccc cgggatcccc 60
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```

Fig. 1f)

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1  MEFHQEEFRK LAGRALGRLH RLLEKQREGA ETELSADGR PVTTHTRDPP VVDCTCFGLP
51  RRYIIAIMSG LGFCISFGIR CNLGVAIVSM VNNSTTHRGG HVVVQKAQFN WDPETVGLIH
101 GSFFWGYIVT QIPGGFICQK FAANRVFGFA IVATSTLNML IPSAARVHYG CVIFVRILQG
151 LVEGVTPAC HGIWSKWAPP LERSRLATTA FCGSYAGAVV AMPLAGVLVQ YSGWSSVFYV
201 YGSFGIFWYL FWLLVSYESP ALHPSISEEE RKYIEDAIGE SAKLMNPVTK FNTPWRRFFT
251 SMPVYAIIVA NFCRSWTFYL LLISQPAYFE EVFGFEISKV GLVSALPHLV MTIIVPIGGQ
301 IADFLRSRHI MSTTNVRKLM NCGGFGMEAT LLLVVGYSHS KGV AISFLVL AVGFSGFAIS
351 GFNVNHL DIA PRYASILMGI SNGVGTLSGM VCPIIVGAMT KHKTREEWQY VFLIASLVHY
401 GGVIFYGVFA SGEKQPWAEF EEMSEEKCGF VGHDQLAGSD ESEMEDEVEP PGAPPAPPPS
451 YGATHSTVQP PRPPPPVRDY
```

Fig. 1g)

```

1      cggccgcgccg ggccccgcggg cgggggggatt ggagggggac ccgcgtgggc acagccacca
61     tggagtcccg  gcaggaggag tttcggaagc tggcggggcg cgcctgggg aggctgcacc
121    ggttactgga  gaagcggcag gaaggcgcgg agacactgga gctgagtgcc gacgggcggc
181    cagtgaccac  gcacactcgg gaccgcctg  tgggtggactg cacctgcttt ggctccctc
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361    acgtgggtgg  gcagaaagcc cagttcaact gggatccaga gactgtcggc ctcatatg
421    gctccttttt  ctggggctac attgtcactc agattcctgg aggatttatc tgccaaaaat
481    tcgcagccaa  cagggctctt ggctttgcca ttgtggctac ctccacccta aacatgttga
541    tcccttcagc  agcccgcggt cactatgggt gtgtcatctt cgtgaggatc cttcagggat
601    tgggtggagg  ggtcacatac cctgcttgcc atggcatctg gagcaaatgg gccctccct
661    tagaacggag  tcggctggca acgacagcct tttgcggttc ctatgctggg gcggtgggtg
721    ccatgccctt  ggctggggtc cttgtgcagt attcaggatg gagttctgtc ttctatgtct
781    atggcagctt  cgggatcttt tggtagctgt tctggttgc  tgtctcctat gactcaccgg
841    cactgcaccc  cagcatctct gaggaggagc gcaaatacat tgaggatgcc atcggggaga
901    ccgcacaagc  catgaaccct gttacgaagt ttaacacacc ctggaggcgc ttctttacgt
961    ccatgcccg  ctatgccatc atcgttgcca acttttgccg cagctggacc ttctacctgc
1021   tcctcatctc  tcagcccgcc tactttgaag aagtgttcgg ctttgagatc agcaagggtg
1081   ggctgggtgc  ggcgctgcct caccttgcca tgaccatcat cgtaccatt  ggaggccaga
1141   tcgctgactt  tttgcgcagt cgtcacataa tgtccactac caacgtgcca aagctcatga
1201   actgcgggg  tttcgggatg gaagccacgc tgctgctgg  ggtcggatac tcgactcca
1261   agggcggtgc  catctccttc ctggtcctgg ctgtgggctt cagtggcttt gccatctgt
1321   ggtttaacgt  gaaccacttg gacatcgccc ctgctatgc  cagcatcttg atgggcattt
1381   ccaatggcgt  gggcacactg tctgggatgg tgtgccccat catcgtgggt gcaatgacca
1441   agcacaagac  gcgggaggag tggcagtagc tgttcctcat agcctccctg gtgcactacg
1501   gcggtgtcat  cttctatggg gtctttgctt cgggagagaa gcagccgtgg gcagagccgg
1561   aggagtagag  cgaggagaag ttgtgctttg ttggccacga ccagctggct ggcatgacg
1621   aaagtgaat  ggaggacgag gctgagcccc caggggcgcc cccgcgcgcg cctccgtcct
1681   acggggccac  acacagcaca gtgcagcctc cgaggcccc  gcccctgtc  cgggactact
1741   gaccacgggc  ctcccactgt ggggcagttt ccaggacttc cactccatac acctctagcc
1801   tgagcggcag  tgtcgaggaa cccactcct  cccctgcctc aggttaaga  tgcaagtctt
1861   cccttgttcc  cagtgtgtgc cgaccagccc tctttccctc tcaactgcct cctgcggggg
1921   gtgaagctgc  aactagcag  tttcaaggat acccagactc ccctgaaagt cgttctccgc
1981   ttgtttctgc  ctgtgtgggc tcaaatctcc cctttgaggg ctttatttgg agggacagtt
2041   caacctcttc  ctctcttgtg gttttgaggt ttcacccctt cccccaagac ccaggggatt
2101   ctcaggctac  ccgagatta  ttcaggtgg  cccctactca gaagacttca tggctgtcct
2161   ctattagttt  caaggctcgc ctaaccaatt ctacattttt ccaagctggt ttaacctaac
2221   caccaatgcc  gccgttccca ggactgattc tcaccagcgt ttctgaggga aaatggcggt
2281   ttcaagtccc  cccaccccc  ttttcttccc tegtccctc  accagcacac ttgcccggc
2341   cttgacctta  gcttagtaca atcattgtcc agggaaatgg ccaaaatggc tctgtccacc
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2701   tacgaatcc  caggaaaggg agcggggctg ggaggagagg gttgttctg  gggcagggtc
2761   gtgtcttgg  gtctgtctc  gtgacgtaaa tctgcctg  cccacccca  ctcccaataa
2821   acgtcttgg  gtacgg

```


Fig. 1h)

1	MEFRQEEFRK	LAGRALGRLH	RLLEKROEGA	ETLELSADGR	PVTTHTRDPP	VVDCTCFGLP
61	RRYIIAIMSG	LGFCISFGIR	CNLGVAIVSM	VNNSTTHRGG	HVVVQKAQFN	WDPETVGLIH
121	GSFFWGYIVT	QIPGGFICQK	FAANRVFGFA	IVATSTLNML	IPSAARVHYG	CVIFVRILQG
181	LVEGVITYPAC	HGIWSKWAPP	LEERSRLATTA	FCGSYAGAVV	AMPLAGVLVQ	YSGWSSVFYV
241	YGSFGIFWYL	FWLLVSYESP	ALHPSISEEE	RKYIEDAIGE	SAKLMNPVTK	FNTPWRRFFT
301	SMPVYAIIVA	NFCRSWTFYL	LLISQPAYFE	EVFGFEISKV	GLVSALPHLV	MTIIVPIGGQ
361	IADFLRSRHI	MSTTNVRKLM	NCGGFGMEAT	LLLVVGYSHS	KGVAISFLVL	AVGFSGFAIS
421	GFNVNHL DIA	PRYASILMGI	SNGVGTLSGM	VCPIIVGAMT	KHKTREEWQY	VFLIASLVHY
481	GGVIFYGVFA	SGEKQPWAEF	EEMSEEKCGF	VGHDQLAGSD	ESEMEDEAEP	PGAPPAPPPS
541	YGATHSTVQP	PRPPPPVRDY				

Fig. 2a)

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Fig. 2 b)

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1    MESVKQRILA PGKEGLKNFA GKSLGQIYRV LEKKQDTGET IELTEDGKPL EVPERKAPLC
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121  PETVGMIHGS FFWGYIITQI PGGYIASRLA ANRVFGAAIL LTSTLNMLIP SAARVHYGCV
181  IFVRILQGLV EGV TYPACHG IWSKWAPPLE RSRLATTSFC GSYAGAVIAM PLAGILVQYT
241  GWSSVFYVYG SFGMVWYMFV LLVSYESPAC HPTITDEERR YIEESIGESA NLLGAMEKFK
301  TPWRKFFTSM PVYAIIVANF CRSWTFYLLL ISQPAYFEEV FGFEISKVGM LSAVPHLVMT
361  IIVPIGGQIA DFLRSKQILS TTVRKIMNC  GGFGMEATLL LVVGYSHTRG VAISFLVLAV
421  GFSGFAISGF NVNHLDIAPR YASILMGISN GVGTLSGMVC PIIVGAMTKN KSREEWQYVF
481  LIAALVHYGG VIFYAIFASG EKQPWADPEE TSEEKCGFIH EDELDEETGD ITQNYINYGT
541  TKSYGATTQA NGGWPSGWEK KEEFVQGEVQ DSHSYKDRVD  YS

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Fig. 2c)

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```

Fig. 2d)

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1    MESVKQRILA PGKEGIKNFA GKSLGQIYRV LEKKQDNRET IELTEDGKPL
51   EVPEKKAPLC DCTCFGLPRR YIIAIMSGLG FCISFGIRCN LGVAIVDMVN
101  NSTIHRGGKV IKEKAKFNWD PETVGMIHGS FFWGYIITQI PGGYIASRLA
151  ANRVFGAAIL LTSTLNMLIP SAARVHYGCV IFVRILQGLV EGVVYPACHG
201  IWSKWAPPLE RSRLATTSFC GSYAGAVIAM PLAGILVQYT GWSSVIFYVYG
251  SFGMVWYMFV LLVSYESPAC HPTITDEERR YIEESIGESA NLLGAMEKFK
301  TPWRKFFTSV PVYAIIVANF CRSWTFYLLL ISQPAYFEEV FGFEISKVGM
351  LSAVPHLVMT IIVPIGGQIA DFLRSKQILS TTVRKIMNC GGFGMEATLL
401  LVVGYSHTRG VAISFLVLAV GFSGFAISGF NVNHLDIAPR YASILMGISN
451  GVGTLSGMVC PIIVGAMTKN KSREEWQYVF LIAALVHYGG VIFYALFASG
501  EKQPWADPEE TSEEKCGFIH EDELDEETGD ITQNYINYGT TKSYGATSQE
551  NGGWPNGWFK KEEFVQESAQ DAYSYKDRDD YS

```

Fig. 2e)

```

1      ggcacgagggc tcagtcttaa ttccactctg ccactctgcc gcagagcaca attacgccgg
61     cgcgatggga ggagaccatg ttaaggcagg aagctaacag cagccgctca cctgaggcct
121    aggaagctcc caagggttct gagagctatg agctctgac agcaaagtca ccattttaga
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2461   aatgtggtgt gaacatgtaa acatatcaac caagcaagtc ttgctgttca aaaaaaaaaa
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```


Fig. 2f)

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1   MESVKQRILA PGKEGIKNFA GKSLGQIYRV LEKKQDNRET IELTEDGKPL EVPEKKAPLC
61  DCTCFGLPRR YIIAIMSGLG FCISFGIRCN LGVAIVDMVN NSTIHRGGKV IKEKAKFNWD
121 PETVGMIHGS FFWGYIITQI PGGYIASRLA ANRVFGAAIL LTSTLNMLIP SAARVHYGCV
181 IFVRILQGLV EGVITYPACHG IWSKWAPPLE RSRLATTSFC GSYAGAVIAM PLAGILVQYT
241 GWSSVFYVYG SFGMVWYMFV LLVSYESPAK HPTITDEERR YIEESIGESA NLLGAMEKFK
301 TPWRKFFTSM PVYAIIVANF CRSWTFYLLL ISQPAYFEEV FGFEISKVGM LSAVPHLVMT
361 IIVPIGGQIA DFLRSKQILS TTTVRKIMNC GGFGMEATLL LVVGYSHTRG VAISFLVLAV
421 GFSGFAISGF NVNHLDIAPR YASILMGISN GVGTLSGMVC PIIVGAMTKN KSREEWQYVF
481 LIAALVHYGG VIFYALFASG EKQPWADPEE TSEEKCGFIH EDELDEETGD ITQNYINYGT
541 TKSYGATSQE NGGWPNGWEK KEEFVQEGAQ DAYTYKDRDD YS

```

FIG 3)

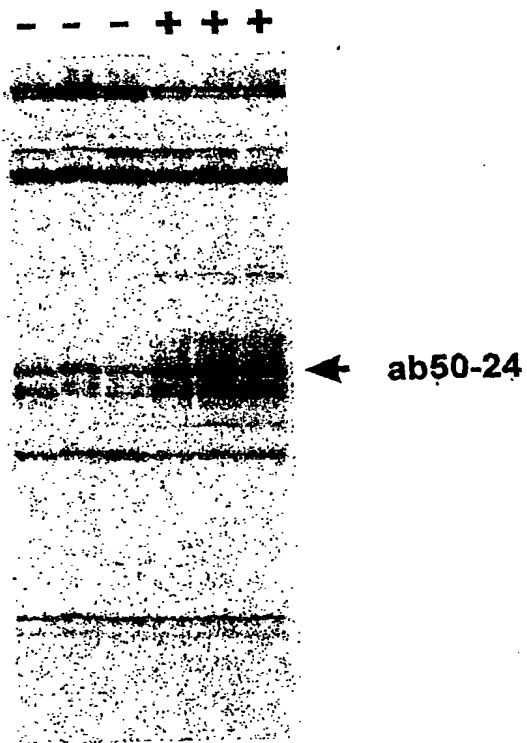


FIG 4)

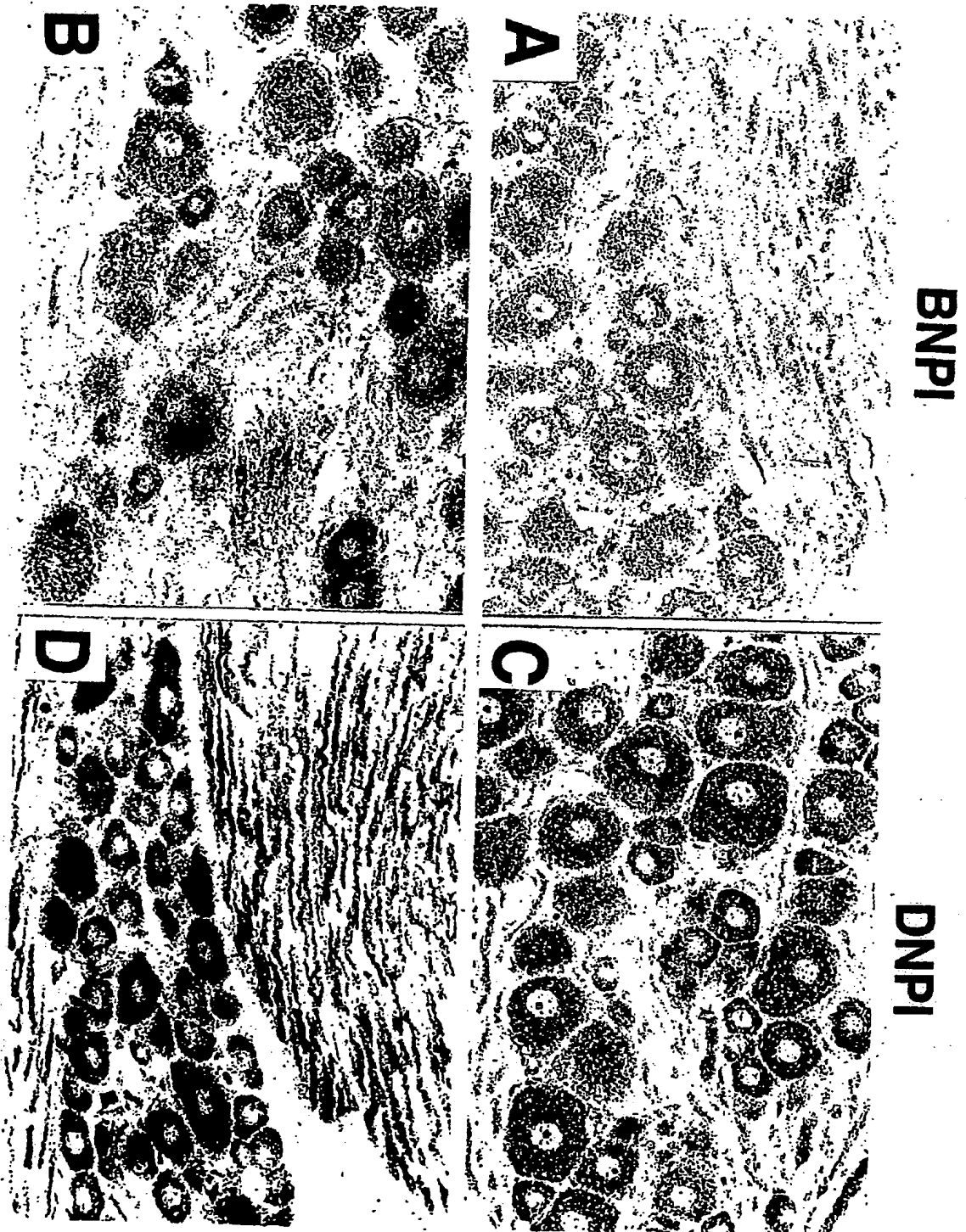


FIG 5)

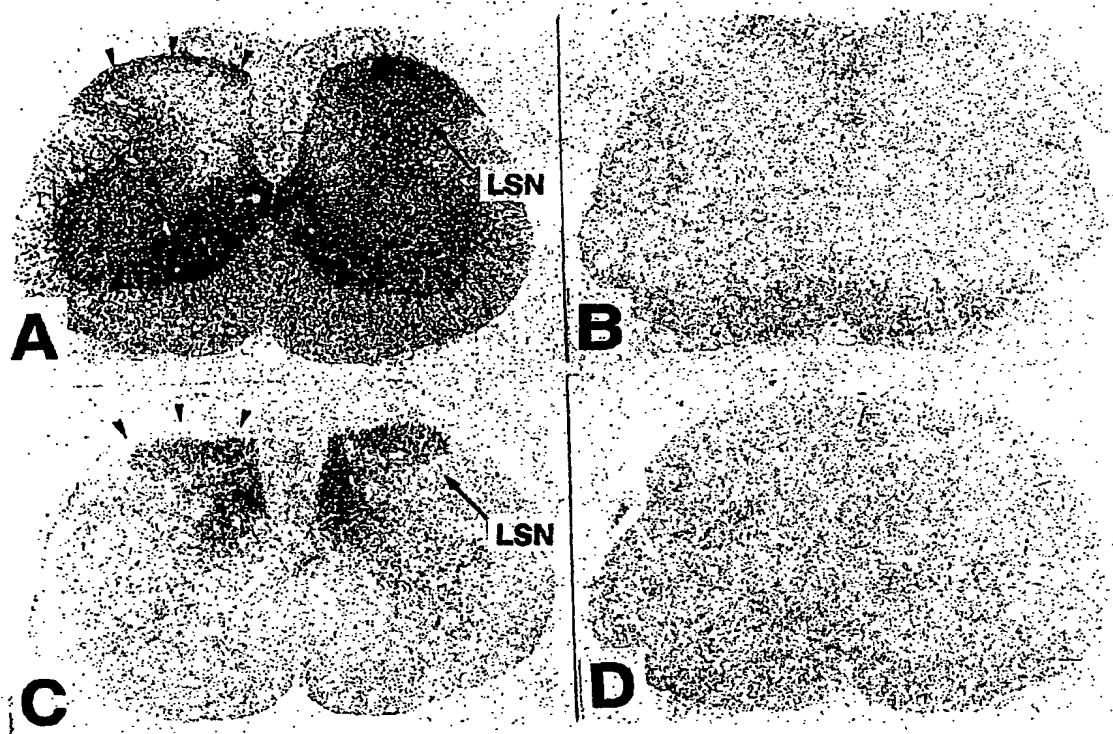


FIG 6)

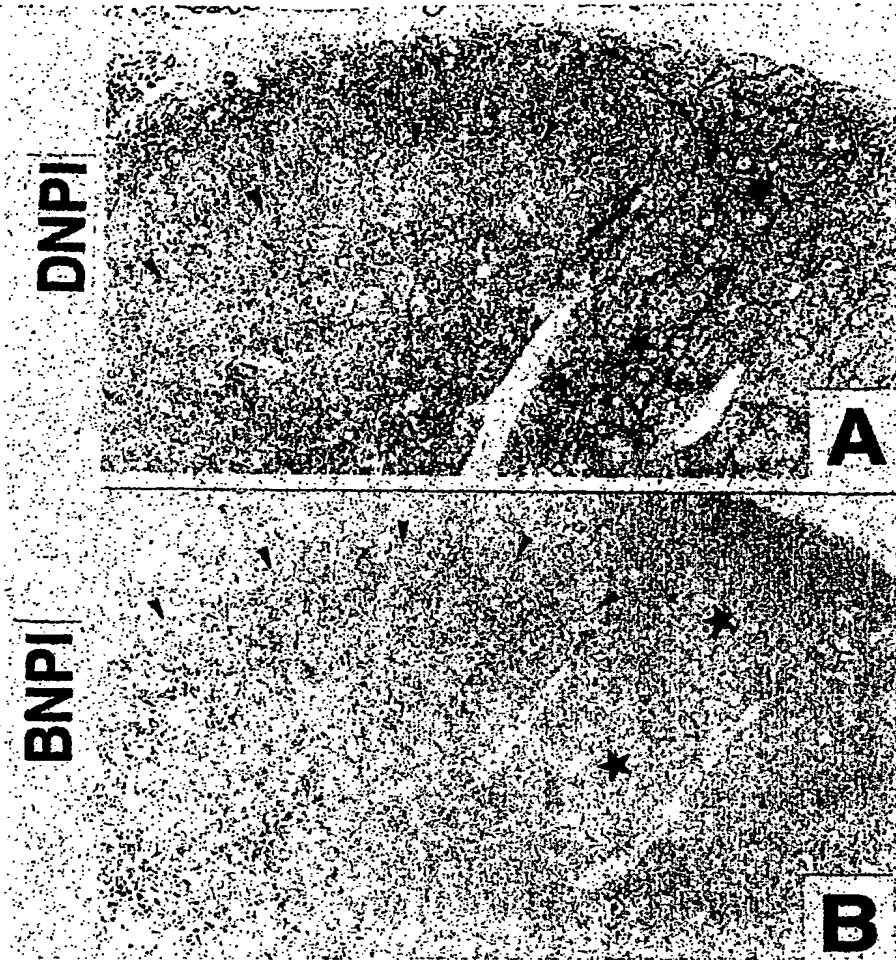


FIG 7)

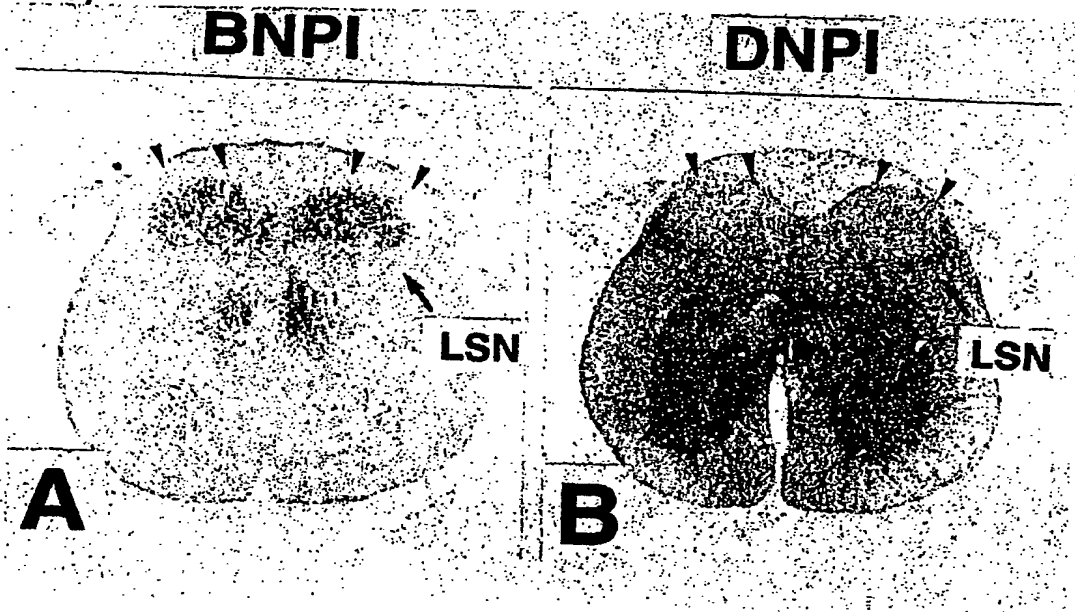


FIG 8)

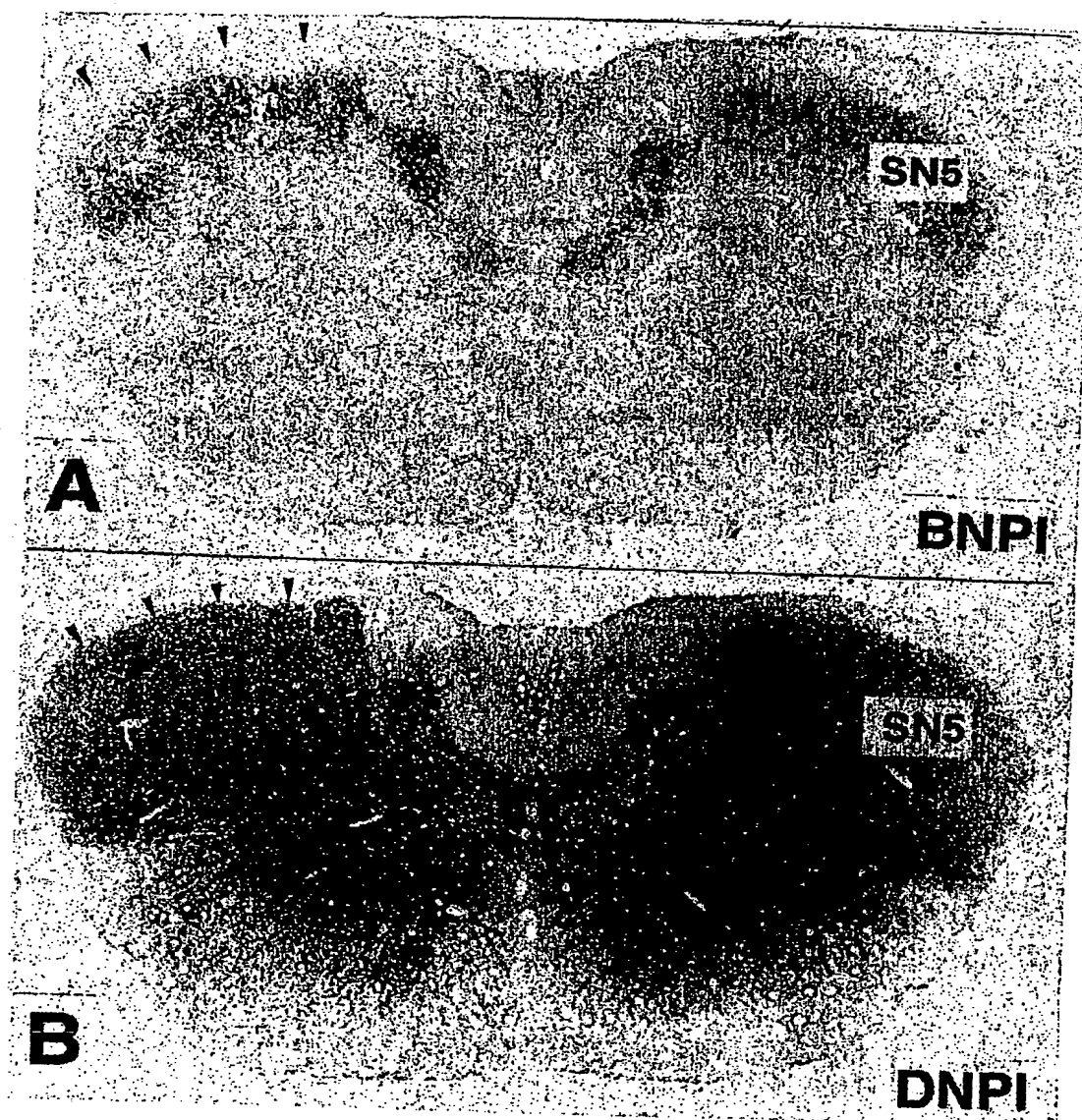


FIG 9)

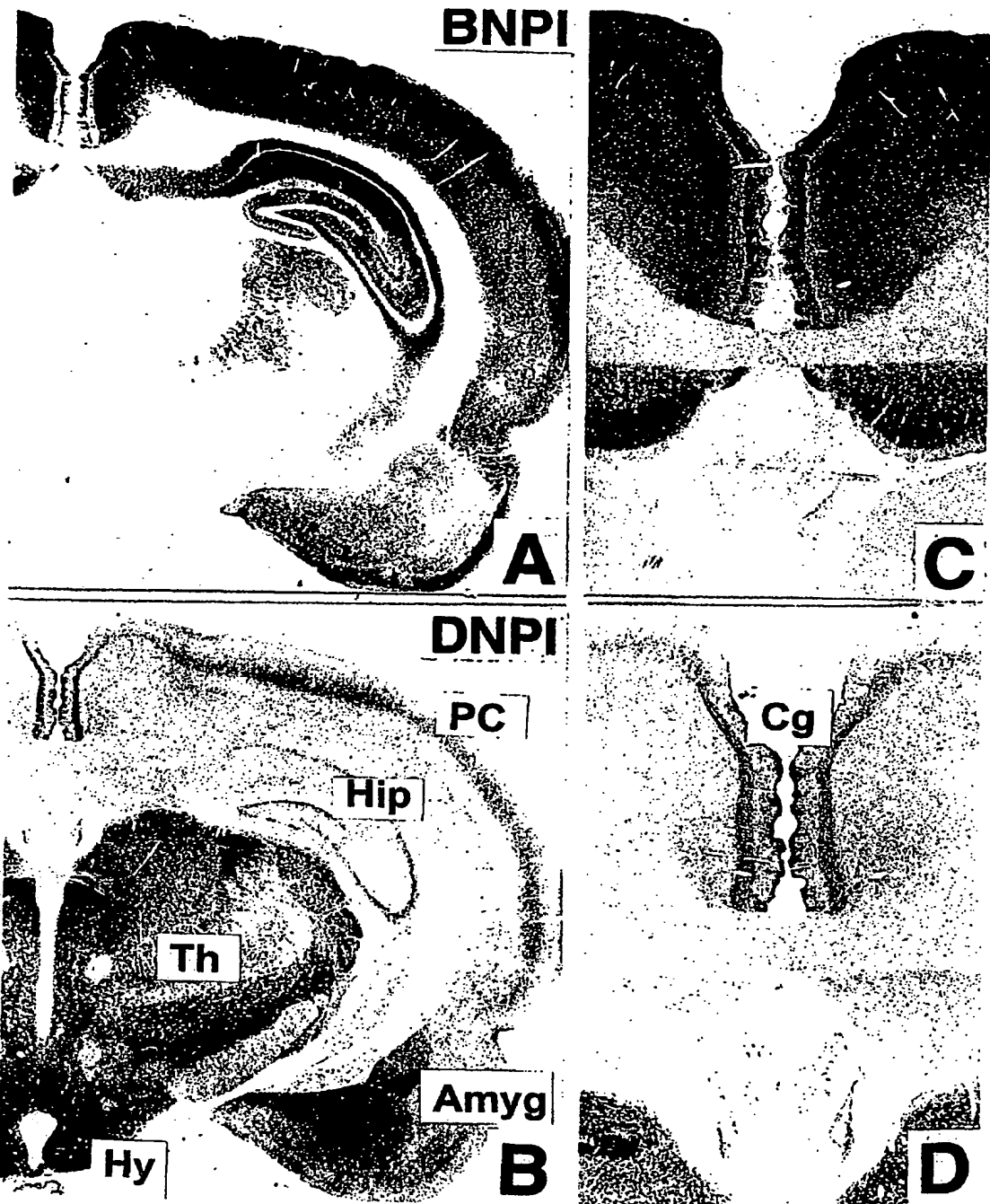


FIG 10)

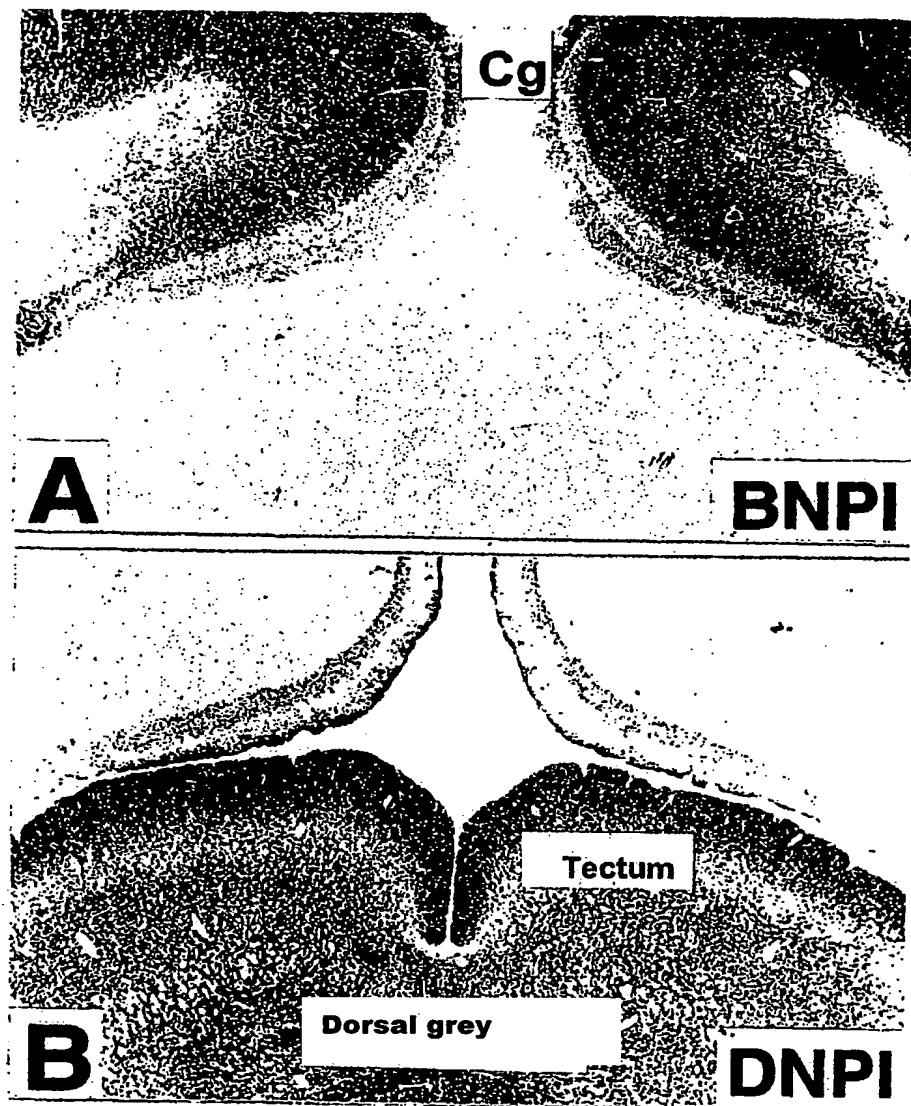


FIG 11)

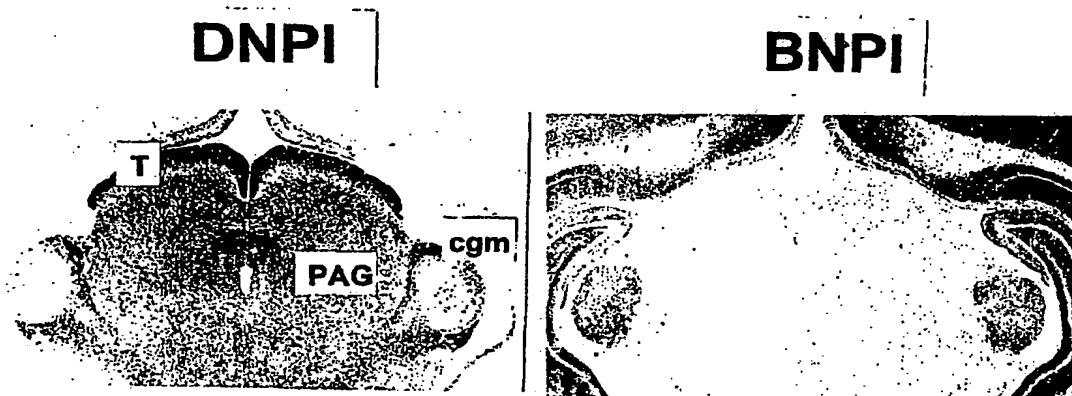


FIG 12)

DNPI



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